

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) MONDAY 12 JAN 1959
Received at London Office

Date of writing Report 2nd Dec., 19 58 When handed in at Local Office 19 Port of TRIESTE

No. in Survey held at Trieste Date, First Survey Last Survey 19
Reg. Book. (No. of Visits) 23457

90405 on the Steam Tanker "ESSO SOUTHAMPTON" Tons Gross 23457 Net

Built at Trieste By whom built C.R.D. Adriatico Yard No. 1839 When built 1958 - 11

Owners Esso Petroleum Co., London Port belonging to London

Installation fitted by C.R.D. Adriatico - S. Marco Trieste When fitted 1958 - 11

Is vessel equipped for carrying Petroleum in bulk. yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. yes Sub.Sig. - Radar. yes

Plans, have they been submitted and approved. yes System of Distribution three wire insulated Voltage of Lighting 115

Heating steam Power 440 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60

Thermovent Prime Movers, has the governing been found as per Rule when full load is thrown on and off. yes Are turbine emergency governors fitted

with a trip switch. yes Generators, are they compound wound. separately excited 110 V. and level compounded under working conditions. yes

Are the generators arranged to run in parallel. yes Is the compound winding connected to the negative or positive pole. -

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing. yes Have certificates of test for machines

under 100 kw. been supplied and the results found as per Rule. yes Position of Generators Main engine room. Control platform

level. Starbd. side aft. Two abreast. Emergency generator upper deck aft.

is the ventilation in way of generators satisfactory. yes are they clear of inflammable material and protected from mechanical injury and

damage from water, steam and oil. yes Switchboards, where are main switchboards placed. Main engine room. Control

platform level. Starbd. side forward

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,

steam and oil. yes, what insulation is used for the panels. dead front type, if of synthetic insulating

material is it an Approved Type. if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as

per Rule. Is the construction as per Rule, including locking of screws and nuts. yes Description of Main Switchgear

for each generator and arrangement of equaliser switches. three pole linked circuit breakers with over current and short

circuit protection, reverse current relays and low voltage protection set to operate at 100 Volts.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. three or two pole linked circuit breakers with

over current and short circuit protection on each pole

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. yes Instruments on main switchboard. 9

ammeters. 1 voltmeters. 1 synchronising devices. For compound machines in parallel are the ammeters and reverse current

protection devices connected on the pole opposite to the equaliser connection. Earth Testing, state means provided. earth lamps

with selector switch. Preference Tripping, state if provided. none, and tested.

Switches, Circuit Breakers and Fuses, are they as per Rule. yes, are the fuses an Approved Type. yes

make of fuses. Artic, are all fuses labelled. yes If circuit breakers are provided for the generators, at what

overload do they operate. 35% - 5 seconds, and at what current do the reverse current protective-

devices operate. 35 amps. Cables, are they insulated and protected as per Rule. yes

if otherwise than as per Rule are they of an Approved Type. - state maximum fall of pressure between bus bars and any point

under maximum load. 2 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends. yes

Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical

damage. yes, are any cables laid under machines or floorplates. yes, if so, are they adequately protected. yes State

type of cables (if in conduit this should also be stated) in machinery spaces. insulated cable, lead covered, steel braided or armoured,

run in conduit where required. State how the cables are supported or protected. supported and protected as per Rules.

steel braided or armoured. run in conduit or in fabricated steel channels as and where required. No cables

in cargo pump rooms.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. yes Are all cables passing through decks and watertight

bulkheads provided with deck tubes or watertight glands. yes, where unarmoured cables pass through beams, etc., are the holes

effectively bushed. yes Refrigerated chambers, are the cables and fittings as per Rule. yes

Have refrigeration fan motors been constructed under survey. - and test certificates supplied

Are the motors accessible for maintenance at all times. -



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... **yes**... Emergency Supply, state position emergency generator and switch board in upper deckhouse aft.

Navigation Lamps, are they separately wired... **yes**... controlled by separate double pole switches and fuses... **yes**... Are the switches and fuses in a position accessible only to the officers on watch... **yes**... is an automatic indicator fitted... **yes**... Is an alternative supply provided... **yes**...

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule... **yes**... state battery capacity in ampere hours... **40 Amp/hr.**... Where required to do so does it comply with 1948 International Convention... **yes**...

Lighting, is fluorescent lighting fitted... **yes**... If so, state nominal lamp voltage... **115**... and compartments where lamps are fitted... **engine rooms, boiler room and accommodation spaces.**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... **yes**

Searchlights, No. of... **1**... for Suez Canal... whether fixed or portable... **portable**... are they of the carbon arc or of the filament type... **filament type**

Heating and Cooking, is the general construction as per Rule... **yes**... are the frames effectually earthed... **yes**... are heaters in the accommodation of the convection type... **steam**... Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil... **yes**

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment... **yes**... Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing... **yes**

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule... **yes**

Lightning Conductors, where required are they fitted as per Rule... **yes**

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with... **yes**... are all fuses of an Approved Cartridge Type... **yes**... make of fuse... **Artic London**... Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships... **yes**... Are all cables lead covered as per Rule... **yes**

E.S.D., if fitted state maker... **Marconi**... location of transmitter and receiver... **frames 113/114**

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations... **yes**

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory... **yes**

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	KVA per Generator.	RATED AT			PRIME MOVER.	
				Volts.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	C.R.D. Adriatico	938	450	1220	1200	Steam	TOSI-Westinghouse Turbine.
Exciters	2	-do-	18	110	164	1200	Turbine	
EMERGENCY	1	-do-	187.5	450	241	1200	Diesel	Suddeutsche Bremen A.G.-M.W.M.
Exciter	1	-do-	7.5	115	61	1200		

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH IN METERS.	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area in sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	2	750	8	3 X 160	1220	1704	12	V.I.R.	Lead covered and steel braided
Exciters	2	18	2	1 X 63	164	234	12	do	do
EMERGENCY GENERATOR	1	150	2	3 X 100	241	310	10	do	do
Exciter for GENERATOR	1	7.5	2	1 X 20	61	112	10	do	do

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area in sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH IN METERS.	INSULATION.	PROTECTIVE COVERING.	
T/1 Transformer 440/115 V.	1		3	3 X 63	104	117	40	V.I.R.	
EP1 Engine room power	1		3	3 X 100	44.5	156	30	do	Lead covered steel braided or armoured.
EP2 Engine room power	1		3	3 X 63	53.2	117	30	do	do
BP1 Boiler room power	1		3	3 X 80	96	136	40	do	do
BP2 Boiler room power	1		3	3 X 100	124	156	35	do	do
EF Engine room ventilation	1		3	3 X 40	76	85	10	do	do
BF Boiler room ventilation	1		3	3 X 63	107	117	25	do	do
AV1) Deck power ventilation	1		3	3 X 32	48	72	190	do	do
AV2)									
CP Air conditioning power	1		3	3 X 80	112	136	50	do	do
RP Refrigerating installation power	1		3	3 X 16	30	49	70	do	do
WS Engine room workshop	1		3	3 X 10	21	38	50	do	do
SC Shore connection	2		3	3 X 160	400	426	75	do	do
T/2 Galley power	1		3	3 X 63	104	117	40	do	do
MDP Midship dist. power	1		3	3 X 100	112	156	130	do	do
ES Emergency switch connectio,	2		3	3 X 100	241	310	55	do	do
BEP Boiler room emergency power panel	1		3	3 X 16	23	49	50	do	do

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area in sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH IN METERS.	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
BL1 Boiler room lighting	1	3 X 6.3	10	29	45	V.I.R.	Lead covered, steel braided or armoured
BL2 " " "	1	3 X 6.3	8	29	30	do	do
ER1 Engine room lighting	1	3 X 16	12	49	12	do	do
ER2 " " "	1	3 X 16	13	49	15	do	do
DL1 Deck lighting	1	3 X 10	7	38	75	do	do
DL2 Deck lighting	1	3 X 10	17	38	50	do	do
DL3 deck lighting	1	3 X 6.3	14	29	50	do	do
DL4 Deck lighting	1	3 X 10	17	38	50	do	do
DL5 Deck lighting	1	3 X 10	15	38	20	do	do
DL6 Deck lighting	1	3 X 6.3	10	29	50	do	do
DL7 Deck lighting	1	3 X 10	16	38	20	do	do
DL8 Deck lighting	1	3 X 10	18	38	30	do	do
EL1 External lighting panel	1	3 X 10	27	38	25	do	do
EL2 External lighting panela	1	3 X 10	20	38	20	do	do
MP1 Domestic power	1	3 X 25	45	63	20	do	do
MP2 Domestic power	1	3 X 25	50	63	20	do	do
MP3 Domestic power	1	3 X 32	65	73	35	do	do
MP4 Domestic power	1	3 X 32	60	73	60	do	do
BW1 Boat winches power	1	3 X 10	19	38	40	do	do
BW2 Boat winches power	1	3 X 10	20	38	40	do	do
NL Navigation lighting	1	2 X 6.3	3	29	30	do	do
IC E.R. & B.R. signal panel	1	3 X 6.3	15	29	50	do	do
SP 440 V. Signal panel	1	3 X 50	60	99	70	do	do
SP 115 V. Signal panel	1	3 X 50	30	99	70	do	do
EML Emergency lighting	1	3 X 10	17	38	70	do	do
Suez Search Light	1	2 X 20	15	56	85	do	do

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area in sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH IN METERS.	INSULATION.	PROTECTIVE COVERING.
SG1 - SG2 Steering gear	2	80	1	3 X 80	109	136	70	V.I.R. Lead covered & steel braided or armoured
LO1 - LO2 Lub. oil pumps	2	30	1	3 X 16	39	49	42	do
LOC Lub. oil cooler pump	1	23	1	3 X 10	31	38	45	do
FDF1/2/3 Forced draft fans	3	110	1	3 X 125	134	180	48	do
MC Main circ. pump	1	145/70	1	3 X 160	177	213	35	do
AC Aux. circ. pump	1	46	1	3 X 32	62	73	15	do
MCC1/2 Condensate pumps	2	38	1	3 X 20	49	56	27	do
ACC Aux. " "	1	27	1	3 X 16	37	49	15	do
FO1/2 Fuel oil pumps	2	14	1	3 X 6.3	19	29	25	do
Fire pump	1	50	1	3 X 32	63	73	55	do
Bilge pump	1	8	1	3 X 6.3	12	29	30	do
Sanitary & emergency fire	2	40	1	3 X 20	52	56	30	do
Combustion control air Comp.	2	17	1	3 X 10	25	38	38	do
E.R. & B.R. vent. fans	8	14	1	3 X 6.3	18	29	30	do

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

CANTIERI RIUNITI DELL'ADRIATICO

Electrical Contractors.

Date 9.12.58

COMPASSES.

Have the compasses been adjusted under working conditions yes

CANTIERI RIUNITI DELL'ADRIATICO

Builder's Signature.

Date 9.12.58

Have the foregoing descriptions and schedules been verified and found correct yes

Is this installation a duplicate of a previous case yes If so, state name of vessel "ESSO WINDSOR"

"As Built" (copies of) Plans Are approved plans forwarded herewith yes If not, state date of approval July, 1957

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith Yes

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) The electrical installation has been constructed and installed under special survey in accordance with the Secretary's letters, approved plans and Rule requirements (including special requirements of Section 15).

The materials and workmanship are good.

On completion the installation was tested under full load and normal working conditions to Rule requirements and found in order.

The insulation resistance and voltage drop was found to comply with the Rules.

The electrical equipment and installation, in my opinion, is suitable for a classed ship having the Notation:

"Carrying petroleum in bulk".

107.5 450 241

Total Capacity of Generators 1650 Kilowatts.

The amount of Fee ... £ 268.170 When applied for,

19

When received,

19

Travelling Expenses (if any) £

Surveyor to Lloyd's Register of Shipping.

J. J. Wilson

FRIDAY 13 FEB 1959

Committee's Minute

Assigned

See Rpt. 1

5m. 6.66 - Transfer. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee's Minute.)

13.1.59



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